

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

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**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see Form PCT/ISA/210 (sheet 2)

Applicant's or agent's file reference  
see Form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/EP2004/003232

International filing date (day/month/year)  
26.03.2004

Priority date (day/month/year)  
16.04.2003

International Patent Classification (IPC) or both national classification and IPC  
G02B6/44

Applicant  
KRONE GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires earlier.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**International application No.  
PCT/EP2004/003232**Box No. I. Basis of this opinion**

JC20 Rec'd PCT/PTO 14 OCT 2005

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ tablê(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2004/003232

**Box No. II. Priority**

1. ☒ The following document has not yet been furnished:

- ☒ copy of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(a)).  
☐ translation of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**Statement**

Novelty	Yes:	Claims	1-12
	No:	Claims	
Inventive Step	Yes:	Claims	1-12
	No:	Claims	
Industrial Applicability	Yes:	Claims	1-12
	No:	Claims	

2. Citations and explanations

see supplementary sheet

JC20 Rec'd FST/PTO 14 OCT 2009

**Point V**

Reference is made to the following documents:

- D1: US 6 418 262 (ADC Telecommunications) July 9, 2002
- D2: WO 00 05611 (ADC Telecommunications) February 3, 2000
- D3: EP 0 617 304 (Reichle + De-Massari AG) September 28, 1994
- D4: JP 09 236709 (Nippon Telegraph & Telephone Corp.) September 9, 1997
- D5: DE 101 13 528 (Reichle + De-Massari AG) September 26, 2002
- D6: DE 299 01 931 (GLT Components GmbH) August 3, 2000
- D7: DE 43 08 228 (Quante AG) October 20, 1994

- 1.1 The subject matter of claim 1 fulfils the requirements of PCT with regard to novelty and inventive step (Article 33(2) PCT and Article 33(3) PCT) in conjunction with the restrictions imposed under point 2:

Glass fiber coupler modules with a cassette mount front panel, coupler and two groups of couplings (for glass fiber plugs) are generally known (see D1 and D2). Such modules are preferably used for the purposes of monitors and couplers. In this case, one group of couplings is usually located in a front panel of the module, and the second group of modules is located inside the module or on its rear side on separate mounting panels. In order to facilitate access to the second group of couplings, the mounting panels are designed in this case such that individual rows of plugs can be extracted from the module laterally (D1) or can be completely dismantled (D2).

All known coupler modules with this design principle in this case have a vertical alignment, i.e. the mounting panel of the second group of couplings is aligned parallel to the front panel with the first group of couplings and so a change to the modules with regard to access to the second coupling group, i.e. the introduction of a pivoting axis, does not seem sensible. (Both in the case of the second coupling group fitted inside the module, and in the case of the second coupling group, fitted on the rear side of the module, the introduction of such a pivoting axis would lead to a greater need for internal cable lengths and to an nonuniform tensile loading and bending loading of the glass fiber cables; in the first case, the space required inside the module would also be greatly increased).

Also known, on the other hand, are glass fiber coupler modules having a horizontal alignment: such modules usually consist, in turn, of a front panel, a cassette

mounting panel fitted thereon at a right angle, a coupler (coupler cassette) fitted on the cassette mounting panel, and a group, installed in the front panel, of couplings (see D3-D7). However, all these modules manage without a second separately fitted group of couplings (instead of which splices are used).

Since there is no motivation for the person skilled in the art to replace the space-saving spliced joints by a second group of couplings for plugs, the known glass fiber coupler modules with horizontal alignment cannot suggest the subject matter of claim 1.

1.2 Since claims 2-12 depend on claim 1, they also meet the requirements of PCT with regard to novelty and inventive step.

2. The application does not meet the requirements of Article 6 PCT. The reasons for this are:

2.1 i) It is not clear in claim 1 whether the coupler and the glass fiber(s) are part of the subject matter claimed or not.

Moreover, it is not clear in claim 1 which features of the couplings are to be defined by the guidance of the glass fibers.

ii) moreover, the geometry of the glass fiber coupler module is not clear from the terminology of claim 1: the general term "cassette mount" is open as to exactly how this mount is designed: for this reason as well, it is not clear where the coupler is located (and in this case, as already set forth, it is not clear in any case whether it is a part of the claimed glass fiber coupler module or not), where the mounting panel is located on the cassette mount, and how the mounting panel is swiveled. Moreover, although it is clear from claim 1 how the first group of couplings is oriented, at least with regard to the front panel, it is not clear how the second group of couplings is oriented.

However, it emerges clearly from the description that the cassette mount is a mounting panel or a flat cassette mounting frame which is mounted at right angles to the front panel, that the coupler, just like the mounting panel, is fastened on and parallel to this mounting frame, and that the pivoting axis of the mounting panel runs parallel to a side edge of the mounting frame or at right angles to the front panel, the plugging directions of the couplings on the mounting panel being oriented like the plugging directions of the couplings in the front panel. Claim 1 is therefore unclear as such, and unclear with regard to the description.

iii) given that the sole exemplary embodiment of the glass fiber coupler module includes a flat cassette mounting frame (or a cassette mounting panel) on which both the coupler and the mounting panel (parallel thereto) for the couplings are fitted and also that there is no indication in the description to be found that the cassette mount could be any other type of design nor how such a different configuration could look since, moreover, the pivoting axis of the mounting panel and the orientation of the couplings on the mounting panel seem to condition one another (a pivoting axis parallel to the front panel seems sensible only for plugging directions parallel to the front panel) and, moreover, only one embodiment is shown and described (the pivoting axis is parallel to a side edge of the flat cassette mounting frame/cassette mounting panel and the couplings are oriented on the mounting panel such that the plugging direction runs parallel to this pivoting axis), the following features seem to be essential to the definition of the invention:

- (1) the cassette mount is a cassette mounting panel or a flat cassette mounting frame which is fastened at right angles to the front panel,
- (2) the mounting panel is mounted parallel to the cassette mounting panel or to the flat cassette mounting frame, the pivoting axis of the mounting panel runs parallel to a side edge of the cassette mounting panel/of the flat cassette mounting frame or perpendicular to the front panel, and
- (3) the couplings are aligned on the mounting panel such that their plugging direction runs parallel to the pivoting axis of the mounting panel.

Since claim 1 does not include the features (1) – (3), it also does not correspond to the requirement of Article 6 PCT in conjunction with Rule 6.3 b) PCT that each independent claim must include all technical features which are essential to the definition of the invention.